

U.S. ARMY SERGEANTS MAJOR ACADEMY (ANCOC)

T421

OCT 03

RISK MANAGEMENT

TRAINING SUPPORT PACKAGE



TRAINING SUPPORT PACKAGE (TSP)

TSP Number / Title	T421 / Risk Management
Effective Date	01 Oct 2003
Supersedes TSP(s) / Lesson(s)	None
TSP Users	600-ANCOC Advanced Noncommissioned Officer Course
Proponent	The proponent for this document is the Sergeants Major Academy.
Improvement Comments	<p>Users are invited to send comments and suggested improvements on DA Form 2028, <i>Recommended Changes to Publications and Blank Forms</i>. Completed forms, or equivalent response, will be mailed or attached to electronic e-mail and transmitted to:</p> <p>COMDT USASMA ATTN ATSS DCA BLDG 11291 BIGGS FIELD FORT BLISS, TX 79918-8002</p> <p>Telephone (Comm) (915) 568-8875 Telephone (DSN) 978-8875 E-mail atss-dcd@bliss.army.mil</p>
Security Clearance / Access	Unclassified
Foreign Disclosure Restrictions	FD5. This product/publication has been reviewed by the product developers in coordination with the USASMA foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

PREFACE

Purpose

This Training Support Package provides the instructor with a standardized lesson plan for presenting instruction for:

Task Number

Task Title

Individual

154-385-6465

EMPLOY RISK MANAGEMENT PROCESS DURING
MISSION PLANNING

This TSP
Contains

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**RISK MANAGEMENT
T421 / Version 1
01 Oct 2003**

SECTION I. ADMINISTRATIVE DATA

All Courses Including This Lesson	<u>Course Number</u>	<u>Version</u>	<u>Course Title</u>
	600-ANCOC	1	Advanced Noncommissioned Officer Course

Task(s) Taught(*) or Supported	<u>Task Number</u>	<u>Task Title</u>
	<u>Individual</u>	
	154-385-6465 (*)	EMPLOY RISK MANAGEMENT PROCESS DURING MISSION PLANNING

Reinforced Task(s)	<u>Task Number</u>	<u>Task Title</u>
	154-385-6263	CONDUCT A RISK ASSESSMENT
	154-385-6465	EMPLOY RISK MANAGEMENT PROCESS DURING MISSION PLANNING

Academic Hours	The academic hours required to teach this lesson are as follows:	
		<u>Resident Hours/Methods</u>
		1 hr / Conference / Discussion
		1 hr / Practical Exercise (Performance)
Test	0 hrs	
Test Review	0 hrs	
	Total Hours:	2 hrs

Test Lesson Number	<u>Hours</u>	<u>Lesson No.</u>
	Testing (to include test review)	E403
	4	

Prerequisite Lesson(s)	<u>Lesson Number</u>	<u>Lesson Title</u>
	None	

Clearance Access	Security Level: Unclassified
	Requirements: There are no clearance or access requirements for the lesson.

Foreign Disclosure Restrictions	FD5. This product/publication has been reviewed by the product developers in coordination with the USASMA foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.
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References			
<u>Number</u>	<u>Title</u>	<u>Date</u>	<u>Additional Information</u>
FM 100-14	Risk Management	23 Apr 1998	

Student Study Assignments

Before class--

- Study FM 100-14 (SH-2), Chapters 1, 2, appendix A and glossary.
- Study Case Study 1 (SH-3).
- Skim FM 100-14 (SH-2), Chapter 3.

During class--

- Participate in classroom discussion.

After class--

- Review classroom notes and materials.
 - Turn in recoverable materials.
-

Instructor Requirements

1:16, Special Qualifications-ITC and SGITC qualified.

Additional Support Personnel Requirements

<u>Name</u>	<u>Stu Ratio</u>	<u>Qty</u>	<u>Man Hours</u>
None			

Equipment Required for Instruction

<u>ID Name</u>	<u>Stu Ratio</u>	<u>Instr Ratio</u>	<u>Spt</u>	<u>Qty</u>	<u>Exp</u>
441-06 LCD Projection System	1:16	1:1	N	1	N
559359 SCREEN PROJECTION	1:16	1:1	N	1	N
702101T134520 DELL CPU, MONITOR, MOUSE, KEYBOARD	1:16	1:1	N	1	N
703500T102257 DESKTOP/EPSON PRINTER	1:16	1:1	N	1	N
SOFTWARE-2 WINDOWS XP, LATEST GOVERNMENT APPROVED VERSION	1:16	1:1	N	1	N

Materials Required**Instructor Materials:**

- Visual Aids (VGT): 6.
- TSP.
- FM 100-14.
- Case study (CS) 1.
- Practical Exercise (PE) 1 and 2, with Solution to PE (SPE) 1 and 2 (appendix C).

Student Materials:

- Case Study 1.
- SH-1 thru SH-3.
- Pen or pencil and writing paper.
- All reference material issued.

**Classroom,
Training Area,
and Range
Requirements**

CLASSROOM INSTRUCTION 900 SF, 16 PN or Classroom Conducive to Small Group Instruction of 16 Students.

**Ammunition
Requirements**

<u>Id</u>	<u>Name</u>	<u>Exp</u>	<u>Stu Ratio</u>	<u>Instr Ratio</u>	<u>Spt Qty</u>
None					

**Instructional
Guidance**

NOTE: Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and identified reference material.

Before class--

- The facilitator may need to create additional questions to ensure student participation continues throughout the lesson material.
- Read TSP and associated material.
- Issue SH-2 to students.

During class--

- Conduct this lesson using the Small Group Instruction method and use the questions provided to generate discussion among the students as the different sites.
- Conduct class in accordance with the Training Support Package (TSP).
- Ask students during questioning to share personal experiences about the subject.

After class--

- Collect recoverable materials.
 - Report any lesson discrepancies to the Senior Instructor.
-

**Proponent
Lesson Plan
Approvals**

<u>Name</u>	<u>Rank</u>	<u>Position</u>	<u>Date</u>
Santa Barbara, Robert	GS-09	Training Specialist	
Eichman, Guy A.	MSG	Course Chief, BNCOC/ANCOG	
Lawson, Brian H.	SGM	Chief, NCOES	
Mays, Albert J.	SGM	CDD	

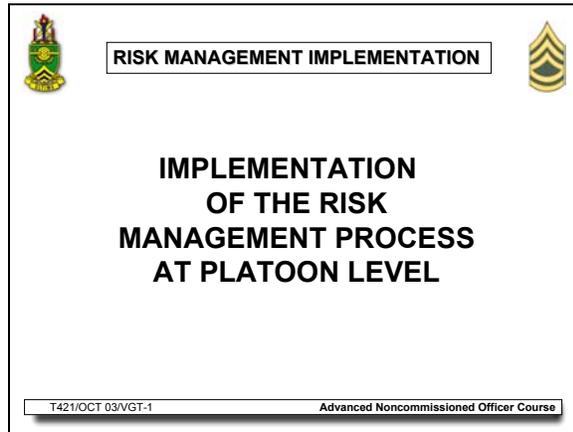
SECTION II. INTRODUCTION

Method of Instruction: <u>Conference / Discussion</u>
Technique of Delivery: <u>Small Group Instruction (SGI)</u>
Instructor to Student Ratio is: <u>1:16</u>
Time of Instruction: <u>5 mins</u>
Media: <u>VGT-1</u>

Motivator

Army operations -- especially combat operations -- are demanding and complex. They are inherently dangerous, including tough, realistic training. Managing risks related to such operations requires educated judgment and professional competence. The risk management process allows individuals to make informed, conscious decisions to accept risks at acceptable levels. Verifying the implementation of the risk management process in your unit is the key to protecting your soldiers and their equipment.

SHOW VGT-1, RISK MANAGEMENT IMPLEMENTATION



The risk management process is a key to the entire soldiering process which aids in protecting your soldiers and their equipment from mission ending accidents.

REMOVE VGT-1

Terminal Learning Objective

NOTE: Inform the students of the following Terminal Learning Objective requirements.
At the completion of this lesson, you [the student] will:

Action:	Verify the implementation of the risk management process at platoon level.
Conditions:	As a platoon sergeant, in a classroom, given FM 100-14 (SH-2).
Standards:	Verified the implementation of the risk management process at platoon level IAW FM 100-14.

Safety Requirements

None

Risk Assessment Level

Low

Environmental Considerations

NOTE: It is the responsibility of all soldiers and DA civilians to protect the environment from damage.

None

Evaluation

You will receive a written examination that will include questions from this lesson. You must correctly answer 70 percent or more of the questions to receive a GO. A GO is a requirement for graduation.

Instructional Lead-In

Perception of risk varies from person to person depending upon the level of expertise and maturity. What is risky or dangerous to one person may not be to another. Senior leaders must be able to supervise and evaluate the process to ensure use of the risk management system and the use of controls are effective in reducing risks to your soldiers and equipment.

SECTION III. PRESENTATION

NOTE: Inform the students of the Enabling Learning Objective requirements.

A. ENABLING LEARNING OBJECTIVE

ACTION:	Identify elements of a risk assessment.
CONDITIONS:	As a platoon sergeant, in a classroom, given FM 100-14 (SH-2).
STANDARDS:	Identified elements of a risk assessment IAW FM 100-14.

1. Learning Step / Activity 1. Identify elements of a risk assessment.

Method of Instruction: Conference / Discussion
Technique of Delivery: Small Group Instruction (SGI)
Instructor to Student Ratio: 1:16
Time of Instruction: 20 mins
Media: Case Study 1 and VGT-2

NOTE: Refer students to Case Study 1 (SH-3-2), which they should have read prior to the start of this instruction. Listed below are some questions to generate student discussion on Case Study 1. Ensure students cover topics to satisfy ELO A.

QUESTION: Why did the platoon sergeant have to identify the hazards in block F?

ANSWER: Ensure students answers include something like the following:

- It's Step 1 of the risk management process.
- It's a part of the risk assessment process.
- It's the first step in risk management.

Ref: SH-2-2 and SH-2-3

QUESTION: What hazards did the platoon sergeant identify and why do you think he chose those specific hazards?

ANSWER: Discussion should include each of the following:

- Cold Weather.
- Uniform.
- New soldiers.
- Dehydration.
- Limited visibility (darkness).
- Equipment load.
- Blistered feet.
- Range safety.

See case study, SH-3-4, block F, Risk Management Worksheet.

QUESTION: Based on the case study, what other hazards would you list in block F?

ANSWER: Students may answer some of the following:

- Time.
- Traffic.
- Animals.

QUESTION: How does Mission, Enemy, Terrain and Weather, Troops, and Time Available (METT-T) enter into the risk assessment function?

ANSWER: Students should answer the following:

- METT-T provides a sound framework for identifying hazards for planning, preparing, and executing operations.
- Analyze the **mission**, consider subsequent missions.
- Look for **enemy** capabilities posing a significant hazard.
- Obvious hazards to operations are **terrain and weather**.
- Analyze capability of friendly **troops**.
- Insufficient **time** to plan, prepare, and execute is a hazard.

Ref: SH-2-5 thru SH-2-9

QUESTION: What is the rule of thumb regarding civilians?

ANSWER: You need to consider hazards to, and safeguarding of civilians in the area of operations.

Ref: SH-2-9

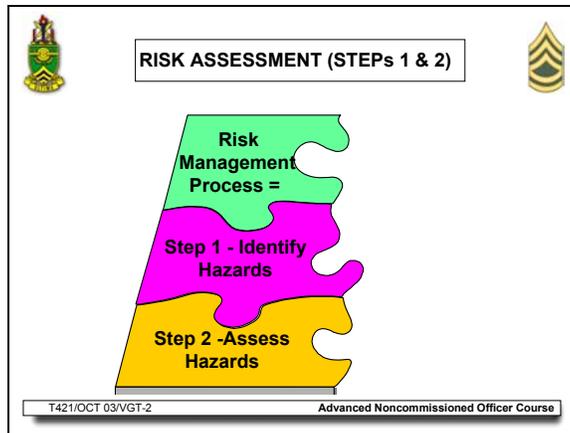
QUESTION: Do you think the identified hazards (block F) have the proper assessments assigned (block G) and why?

- Cold Weather – (E) Extremely High.
- Uniform – (M) Moderate.
- New soldiers – (M) Moderate.
- Dehydration – (H) High.
- Limited visibility (darkness) – (E) Extremely High.
- Equipment load – (H) High.
- Blistered feet – (H) High.
- Range safety – (E) Extremely High.

ANSWER: Ensure the students discussion include an understanding of what E (extremely high), H (high), M (moderate) and L (low) means in assessing a hazard.

Ref: SH-2-14 and SH-2-15

SHOW VGT-2, RISK ASSESSMENT (STEPS 1 & 2)



Ref: SH-2-4 and SH-2-9

NOTE: Have student(s) summarize the information from the last two steps/points discussed to ensure an understanding of what comprises the elements of a risk assessment.

REMOVE VGT-2

B. ENABLING LEARNING OBJECTIVE

ACTION:	Identify controls for implementation of a risk assessment.
CONDITIONS:	As a platoon sergeant, in a classroom, given FM 100-14 (SH-2).
STANDARDS:	Identified controls for implementation of risk assessment IAW FM 100-14.

1. Learning Step / Activity 1. Identify controls for implementation of a risk assessment.

Method of Instruction: Conference / Discussion
 Technique of Delivery: Small Group Instruction (SGI)
 Instructor to Student Ratio: 1:16
 Time of Instruction: 15 mins
 Media: Case Study 1 and VGT-3 and VGT-4

QUESTION: What are the basic categories of controls?

NOTE: Have students give examples of each control.

ANSWER: The answers should include:

- Educational.
- Physical.
- Avoidance.

Ref: SH-2-16

QUESTION: What are some examples of controls that you have used in the past?

ANSWER: Allow a few students to provide some examples, then move on.

Ref: SH-2-17

QUESTION: Based on the case study, what controls would you use that are different from the platoon sergeant controls?

ANSWER: Answers should include the following:

- Rehearsals, battle drills, experience, skills, knowledge, etc.

Ref: SH-2-19

QUESTION: Once you develop and accept the controls, what should you do next in the risk assessment process?

ANSWER: Answers should include the following:

- You need to determine the “residual risk” associated with each hazard.

Ref: SH-2-18

QUESTION: What “tool” is available in FM 100-14 to use in conjunction with the commanders' guidance to aid in making the risk decision?

ANSWER: Answers should include the following:

- The Risk Assessment Matrix, SH-2-13

SHOW VGT-3, RISK ASSESSMENT MATRIX

RISK ASSESSMENT MATRIX						
SEVERITY		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
CATASTROPHIC	I	E	E	H	H	M
CRITICAL	II	E	H	H	M	L
MARGINAL	III	H	M	M	L	L
NEGLIGIBLE	IV	M	L	L	L	L

E - Extremely High Risk - Loss of ability to accomplish the mission.
H - High Risk - Significantly degrades mission capabilities in terms of required mission standards.
M - Moderate Risk - Degrades mission capabilities in terms of required mission standards.
L - Low Risk - Little or no impact on accomplishment of mission.

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Ref: SH-2-13

REMOVE VGT-3

NOTE: Ensure students understand the two substeps prior to moving on.

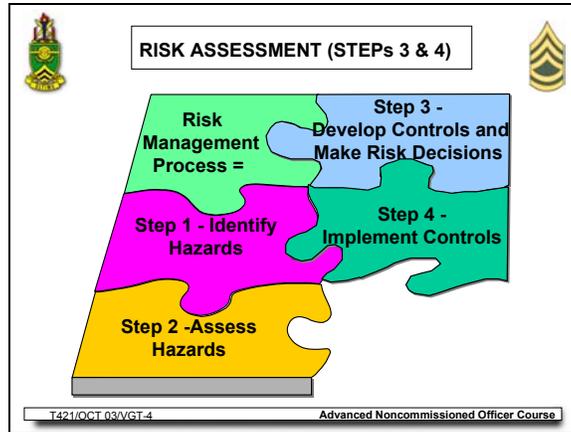
QUESTION: What are some of the ways you can implement controls?

ANSWER: Should include the following:

- You can implement controls by integrating them into SOPs (tactical, safety, garrison, etc.), written and verbal orders, mission briefings, and staff estimates.

Ref: SH-2-15 thru SH-2-19

SHOW VGT-4, RISK ASSESSMENT (STEPS 3 & 4)



Ref: SH-2-15 thru SH-2-19

NOTE: Spend a minute or two summarizing the information from the last two steps/points (steps 3 & 4).

REMOVE VGT-4

C. ENABLING LEARNING OBJECTIVE

ACTION:	Identify methods to monitor the controls implemented for a risk assessment.
CONDITIONS:	As a platoon sergeant, in a classroom, given FM 100-14 (SH-2).
STANDARDS:	Identified methods to monitor the controls implemented for a risk assessment IAW given FM 100-14.

1. Learning Step / Activity 1. Identify methods to monitor the controls implemented for a risk assessment.

- Method of Instruction: Conference / Discussion
- Technique of Delivery: Small Group Instruction (SGI)
- Instructor to Student Ratio: 1:16
- Time of Instruction: 5 mins
- Media: Case Study 1 and VGT-5 and VGT-6

The last step of the risk management is to verify the effectiveness of the controls which involves supervising and evaluating.

QUESTION: How do you supervise and evaluate the risk assessment process in your unit?

ANSWER: Should include the following:

- Leaders supervise mission rehearsal and execution to ensure enforcement of standards and controls. During sustained operations a leader should continue planning to ensure controls emplaced at the beginning of the mission apply to changes in the current situation of the operation.

Ref: SH-2-20

QUESTION: Based on the case study, what should you do once the mission/task of the tactical road march and weapons qualification starts?

ANSWER: There is no school solution, just have students relate their ideas and suggestions.

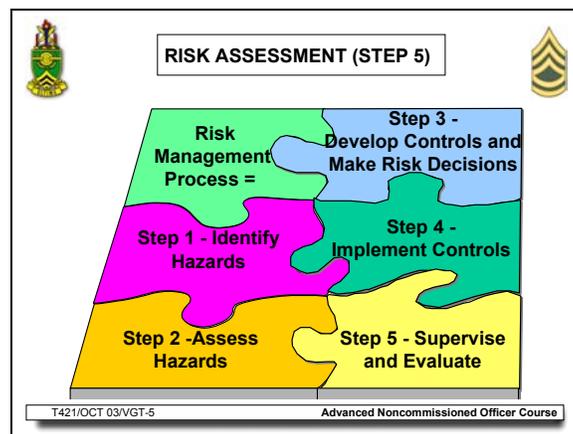
QUESTION: What are some of the essential elements you need to consider during the evaluation process?

ANSWER: Should include the following:

- Upon completion of a mission you should evaluate how well the risk management execution process went. Ensure you determine how to continue the successes into the next mission.

Ref: SH-2-20 and SH-2-21

SHOW VGT-5, RISK ASSESSMENT (STEP 5)



Ref: SH-2-19 thru SH-2-21

Step 5, supervise and evaluate, completes the pieces of the risk management “puzzle.”

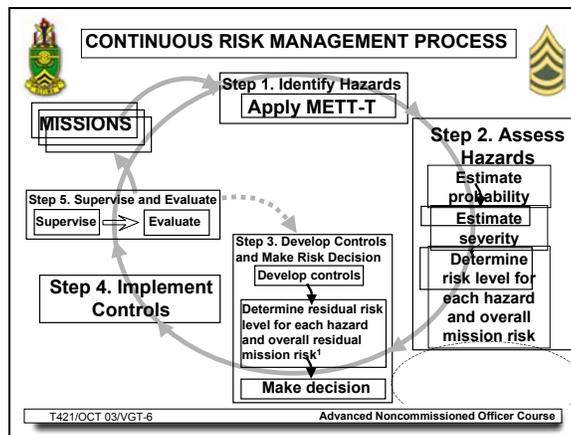
NOTE: Have student(s) summarize the information from the last step discussed to ensure an understanding of what supervise and evaluate means.

REMOVE VGT-5

SHOW VGT-6, CONTINUOUS RISK MANAGEMENT PROCESS

NOTE: In the event VGT-6 is too small to read on the screen, have the students turn to SH-2-22, figure 2-7, SH-2 to follow along.

This VGT depicts the entire risk management process, which is continuous and ongoing throughout a mission as well as from mission to mission. It is an integral part of the military decision-making process.



Ref: SH-2-22

Its application requires good judgment and intuitive analysis borne of confidence, experience, and situational awareness.

NOTE: Ask the students if they have any questions or comments about the previous one-hour block of instruction on the risk management process. If yes, discuss for a few minutes, if not, conduct brief review of the material covered, using VGT-6, to conclude the class.

REMOVE VGT-6

Break TIME: 00:50 to 01:00

2. Learning Step / Activity 2. Risk Management Practical Exercise (TLO).

Method of Instruction: Practical Exercise (Performance)
Technique of Delivery: Small Group Instruction (SGI)
Instructor to Student Ratio: 1:16
Time of Instruction: 1 hr
Media: Pes 1 and 2 with Solutions to PEs

NOTE: Separate the class into four (2) teams and provide each team with a different numbered PE to complete. Give the teams 30 minutes to complete the PE. Each team will brief its completed PE for review and a critique to the class. Each team will receive a solution to the PE, however, ensure each team understands that there is no real school solution and that the answers submitted may be different than what the solution sheet contains.

SECTION IV. SUMMARY

Method of Instruction: <u>Conference / Discussion</u>
Technique of Delivery: <u>Small Group Instruction (SGI)</u>
Instructor to Student Ratio is: <u>1:16</u>
Time of Instruction: <u>5 mins</u>
Media: <u>None</u>

Check on Learning

The practical exercises serves as the check on learning for this lesson.

Review / Summarize Lesson

During the last two hours we discussed how to determine the objective of managing risk which is not to remove all risk, but to remove unnecessary risk. As a platoon sergeant you are in the best position to assist the commander and the unit in accomplishing this vital function.

SECTION V. STUDENT EVALUATION

Testing Requirements

NOTE: Describe how the student must demonstrate accomplishment of the TLO. Refer student to the Student Evaluation Plan.

You will receive a written examination that will include questions from this lesson. You must correctly answer 70 percent or more of the questions to receive a GO. A GO is a requirement for graduation.

Feedback Requirements

NOTE: Feedback is essential to effective learning. Schedule and provide feedback on the evaluation and any information to help answer students' questions about the test. Provide remedial training as needed.

You will participate in an After Action Review (AAR) immediately following the examination for this particular lesson.

Terminal Learning Objective

VGT-1, RISK MANAGEMENT IMPLEMENTATION



RISK MANAGEMENT IMPLEMENTATION



**IMPLEMENTATION
OF THE RISK
MANAGEMENT PROCESS
AT PLATOON LEVEL**

T421/OCT 03/VGT-1

Advanced Noncommissioned Officer Course

Enabling Learning Objective A

Learning Step 1

VGT-2, RISK ASSESSMENT (STEPS 1 AND 2)

RISK ASSESSMENT (STEPS 1 & 2)

Risk Management Process =

Step 1 - Identify Hazards

Step 2 - Assess Hazards

T421/OCT 03/VGT-2 **Advanced Noncommissioned Officer Course**

Enabling Learning Objective B

Learning Step 1

VGT-3, RISK ASSESSMENT MATRIX



RISK ASSESSMENT MATRIX



SEVERITY		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
CATASTROPHIC	I	E	E	H	H	M
CRITICAL	II	E	H	H	M	L
MARGINAL	III	H	M	M	L	L
NEGLIGIBLE	IV	M	L	L	L	L

E - Extremely High Risk - Loss of ability to accomplish the mission.
H - High Risk - Significantly degrades mission capabilities in terms of required mission standards.
M - Moderate Risk - Degrades mission capabilities in terms of required mission standards.
L - Low Risk - Little or no impact on accomplishment of mission.

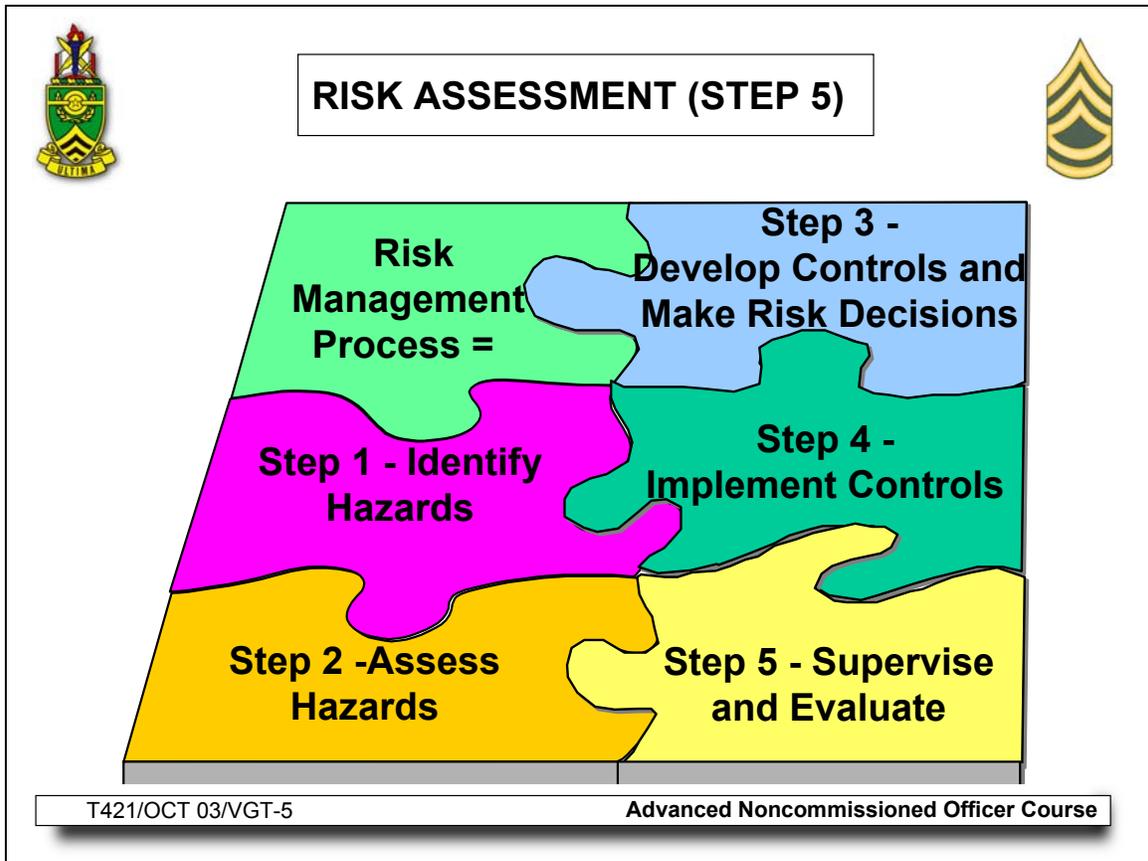
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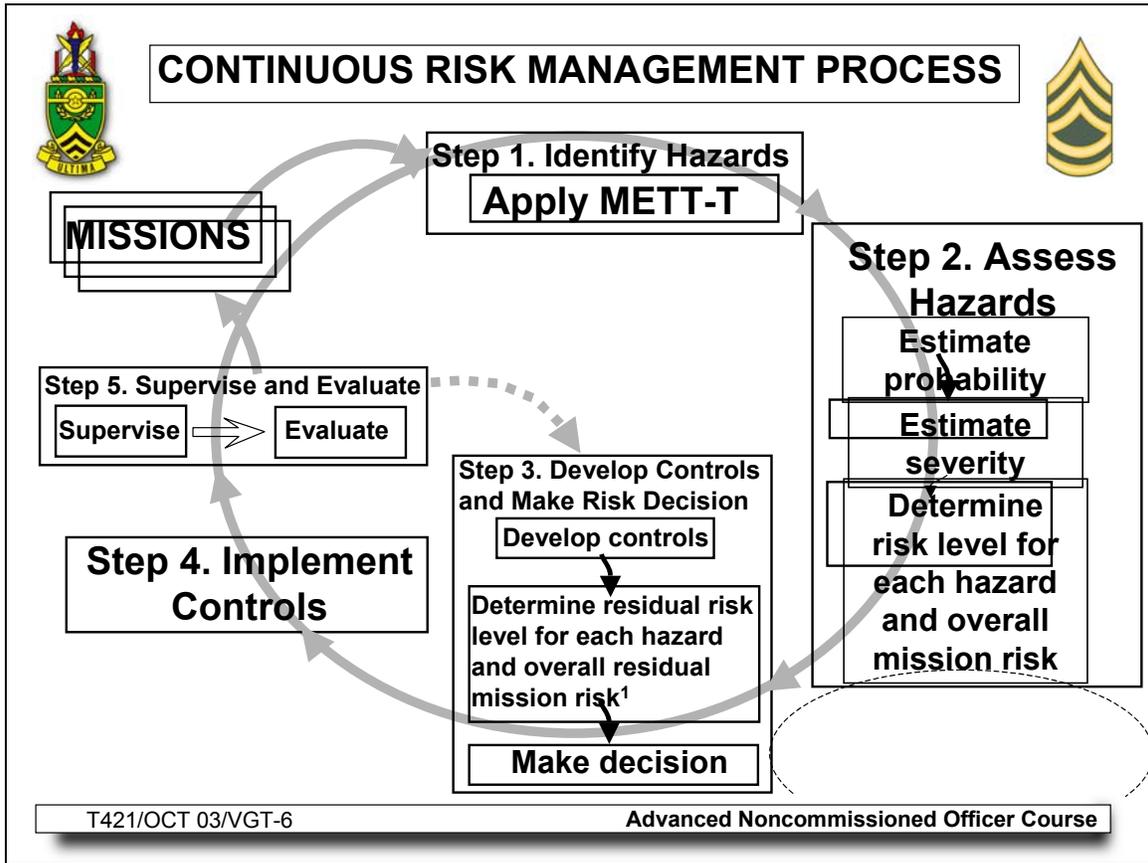


Enabling Learning Objective C

Learning Step 1

VGT-5, RISK ASSESSMENT (STEP 5)





Appendix B Test(s) and Test Solution(s) (N/A)

PRACTICAL EXERCISE SHEET PE-1

Title	RISK MANAGEMENT		
Lesson Number/Title	T421 version 1 / RISK MANAGEMENT		
Introduction	As a platoon sergeant, you need to continuously conduct risk management assessments to protect your soldiers and their equipment from mishaps and to preserve resources within your unit.		
Motivator	This practical exercise will reinforce your ability to conduct a risk assessment for various types of training or actual mission tasks.		
Learning Step/Activity	<p>NOTE: The instructor should inform the students of the following Learning Step/Activity requirements. (ELO C.2)</p> <p>At the completion of this lesson, you [the student] will:</p> <table border="1"><tr><td>Action:</td><td>Conduct Risk Management Practical Exercise (TLO).</td></tr></table>	Action:	Conduct Risk Management Practical Exercise (TLO).
Action:	Conduct Risk Management Practical Exercise (TLO).		
Safety Requirements	None		
Risk Assessment Level	Low		
Environmental Considerations	None		
Evaluation	This is not a graded exercise. The instructor will conduct a review and discussion of selected PE's, as deemed necessary. You will receive a solution sheet at the completion of the discussion; however, keep in mind that there may be more than one solution.		
Instructional Lead-In	This practical exercise will give you the experience in evaluating and implementing a viable risk assessment process within your daily activities.		

Resource Requirements**Instructor Materials:**

Case Study.

Student Materials:

Pen or pencil.

Special Instructions

Complete this practical exercise using the blank Risk Management Worksheet (at C-4) and the Hazard Determination Chart (at C-5) to complete Step 1 thru Step 5 in the activities block below. You may use FM 100-14 (SH-2), for reference, to assist in completing this PE.

Procedures**SCENARIO:**

You are a platoon sergeant in a mechanized infantry company. Your battalion is at the National Training Center (NTC) for three days as a part of Task Force (TF) XXI. The mission of TF XXI is to engage and defeat the OPFOR, which claims control of the NTC area of operations. The task for your platoon is to seize and hold a small unimproved airfield (approximately 10 kilometers from your current position). Your platoon has 48 hours to accomplish this task. The time is 0600 (today's date).

SITUATION:

Your platoon is in a compound surrounded by layered concertina wire with anti-vehicular and personnel minefields in front of the wire. Intelligence indicates that the defense of the airfield is by a well-equipped, dug-in enemy force estimated to be a platoon-sized element. Fortifications include individual fighting positions and some sand bag emplacements for mortars and crew served machine guns. The terrain between your current position and the airfield is open and maneuverable, but provides little or no cover and concealment. The weather is moderate with temperatures in the 40s during the day, and in the 30s at night, winds at 5-10 MPH, with no precipitation in the forecast. The experience level of your soldiers varies from 15 percent Desert Shield/Storm veterans, 20 percent young first term soldiers (with less than 24 months in the service), and the rest are second term soldiers. A recent training assessment indicated your platoon as well trained. After reviewing the OPORD, you have decided the best opportunity for success is a night attack. You have well-rested soldiers and your last resupply was just last night.

ACTIVITIES:

Step 1 - Complete blocks A thru E of the Risk Management Worksheet at C-4.

Step 2 - Use the scenario and situation above to identify and list as many hazards as you can in block F of the Risk Management Worksheet at C-4.

Step 3 - Determine which hazard to risk-manage using the Hazard Determination Chart at C-5.

Step 4 - Based on your selected probability and severity, use the risk assessment matrix to determine the risk level of each hazard in block G of the Risk Management Worksheet at C-4.

Step 5 – Brief your completed Risk Management Worksheet and Hazard Determination Chart to your class for review and critique, as necessary.

Note: We will not use blocks H, I, J, and K for this practical exercise.

Use the blank Risk Management Worksheet to complete your Risk Management Assessment for this Practical Exercise at C-4.

Hazard Determination Chart Use the hazard determination chart (below) to see which hazards, listed in block F of the Risk Management Worksheet, that you will need to risk-manage.

LIST EACH HAZARD IN A SEPARATE SPACE TO THE RIGHT (from block F of the Risk Management Worksheet at C-4).

Can you adequately control the hazard?

Question:

		Adequate		Adequate		Adequate		Adequate		Adequate		Adequate		Adequate		Adequate	
		Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Identified METT-T Hazards	SUPPORT – Is support available (personnel, equipment, supplies, facilities) adequate to control the hazard?																
	STANDARDS – Is guidance or procedures adequately clear, practical, and specific to control hazard?																
	TRAINING Is training adequate to control the hazard?																
	LEADER Are leaders ready, willing, and able to enforce standards required to control hazard?																
	INDIVIDUAL Is soldier performance sufficiently self-disciplined to control hazard?																

- Answer - If all the hazards are “yes,” no further action required.
 - If one or more of the hazards are “no,” risk-manage the hazards.

Note: Use as many sheets as you need to list all of the hazards in Block F of your Risk Management Worksheet.

**SOLUTION FOR
PRACTICAL EXERCISE PE-1**

**SOLUTION FOR
PRACTICAL EXERCISE PE-1**

Risk Management Worksheet

Risk Management Worksheet (Assessment of hazards).

The possible answers to Practical Exercise 1 (Risk Management Worksheet) are as follows: (Note: Your answers may be different than those listed below).

RISK MANAGEMENT WORKSHEET					
A. Mission or Task: <i>Engage/defeat</i>		B. Date/Time Group: Begin: DD0600AMMMY End: DD0600AMMMY		C. Date Prepared: DD MMM YY	
D. Prepared By: (Rank, Last Name, Duty Position)					
E. Task	F: Identify Hazards	G: Assess Hazards	H. Develop Controls	I: Determine Residual Risk	J: Implement Controls ("How To")
<i>Seize / hold Airfield</i>	<i>Open terrain Cold Weather Visibility Limited (Night) Soldier experience Obstacles Fratricide Small Enemy Force</i>	<i>E H E H H E E</i>	DO	NOT	USE
K. Determine overall mission/task risk level after controls are implemented (circle one):					
LOW (L)	MODERATE (M)	HIGH (H)	EXTREMELY HIGH (E)		

NOTE: Upon completion of blocks H, I, and J (implementing the controls for each hazard listed) you would then determine the overall mission/task risk level and circle one of the selections in block K.

PRACTICAL EXERCISE SHEET PE-2

Title	RISK MANAGEMENT		
Lesson Number/Title	T421 version 1 / RISK MANAGEMENT		
Introduction	As a platoon sergeant, you need to continuously conduct risk management assessments to protect your soldiers and their equipment from mishaps and to preserve resources within your unit.		
Motivator	This practical exercise will reinforce your ability to conduct a risk assessment for various types of training or actual mission tasks.		
Learning Step/Activity	<p>NOTE: The instructor should inform the students of the following Learning Step/Activity requirements. (ELO C.2)</p> <p>At the completion of this lesson, you [the student] will:</p> <table border="1"><tr><td>Action:</td><td>Conduct Risk Management Practical Exercise (TLO).</td></tr></table>	Action:	Conduct Risk Management Practical Exercise (TLO).
Action:	Conduct Risk Management Practical Exercise (TLO).		
Safety Requirements	None		
Risk Assessment Level	Low		
Environmental Considerations	None		
Evaluation	This is not a graded exercise. The instructor will conduct a review and discussion of selected PE's, as deemed necessary. You will receive a solution sheet at the completion of the discussion; however, keep in mind that there may be more than one solution.		
Instructional Lead-In	This practical exercise will give you the experience in evaluating and implementing a viable risk assessment process within your daily activities.		

Resource Requirements**Instructor Materials:**

Case Study.

Student Materials:

Pen or Pencil.

Special Instructions

Complete this practical exercise using the blank Risk Management Worksheet (at C-11) and the Hazard Determination Chart (at C-12) to complete Step 1 thru Step 5 in the activities block. You may use FM 100-14 (SH-2), for reference, to assist in completing this PE.

Procedures**SCENARIO:**

You are a platoon sergeant in an infantry company. Your battalion is at the National Training Center (NTC) for a battalion-sized FTX. It is day three of the seven day FTX. The commander gives you a warning order, 051200AJUNXX, to conduct a dismounted tactical roadmarch to start at 060700AJUNXX and to arrive and secure the objective (a new battalion TACCP site) at 061800AJUNXX. The objective is approximately 15 kilometers from your current position. Intelligence estimates state that there are enemy (OPFOR) patrols (two squad-sized elements) operating along the tactical roadmarch route. Current location and strength of the patrols is unknown at this time. Your platoon has 11 hours to accomplish this task.

SITUATION:

The terrain your platoon must negotiate along the roadmarch route is uneven, with small hills, and heavy vegetation in some areas. The weather is hot and humid with temperatures in the low 90s during the day and in the low 70s at night. There is no precipitation in the forecast for the next 24 hours. The platoon is at 90 percent strength with one team leader position not filled. Your last resupply of food, water, and ammunition was yesterday. Each soldier will carry his or her own assigned weapon, LCE (with two full canteens), and a 30 pound ruck sack (filled with the essentials).

You arrived as platoon sergeant 6 months ago. During that time period you participated in the battalion EIB testing, company lane training, and one other 3-day, FTX. Your unit also has twenty personnel who trained for the EIB with a total of only four EIB's awarded upon completion of that training. Members of your unit have had extensive training under similar conditions in the past so you consider them acclimated to the conditions you will now face during this roadmarch. Three personnel have had "heat related" injuries in the past 6 months. Each platoon has one combat lifesaver assigned but the TACSOP requires that each platoon have two combat lifesaver qualified personnel. Your platoon received three new personnel just prior (one week) to departing for NTC.

ACTIVITIES:

Step 1 - Complete blocks A thru E of the Risk Management Worksheet at C-11.

Step 2 - Use the scenario and situation above to identify and list as many hazards as you can in block F of the Risk Management Worksheet at C-11.

Step 3 - Determine which hazards to risk-manage using the Hazard Determination Chart at C-12.

Step 4 - Based on your selected probability and severity, use the risk assessment matrix to determine the risk level of each hazard in block G of the Risk Management Worksheet at C-11.

Step 5 - Brief your completed Risk Management Worksheet and Hazard Determination Chart to your class for review and critique, as necessary.

Note: We will not use blocks H, I, J, and K for this practical exercise.

RISK MANAGEMENT WORKSHEET:

Use this blank Risk Management Worksheet to complete your Risk Management Assessment for this Practical Exercise.

RISK MANAGEMENT WORKSHEET

A. Mission or Task:		B. Date/Time Group: Begin: End:		C. Date Prepared:	
D. Prepared By: (Rank, Last Name, Duty Position)					
E. Task	F: Identify Hazards	G: Assess Hazards	H. Develop Controls	I: Determine Residual Risk	J: Implement Controls ("How To")
			DO	NOT	USE
K. Determine overall mission/task risk level after controls are implemented (circle one):					
LOW (L)		MODERATE (M)		HIGH (H)	
EXTREMELY HIGH (E)					

HAZARD DETERMINATION CHART:

Use the hazard determination chart (below) to see which hazards, listed in block F of the Risk Management Worksheet, that you will need to risk-manage.

LIST EACH HAZARD IN A SEPARATE SPACE TO THE RIGHT (from block F of the Risk Management Worksheet at C-11).

Can you adequately control the hazard?

Question:

		Adequate																	
		Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Identified METT-T Hazards	SUPPORT – Is support available (personnel, equipment, supplies, facilities) adequate to control the hazard?																		
	STANDARDS – Are procedures or guidance adequately clear, practical, and specific to control hazard?																		
	TRAINING Is training adequate to control the hazard?																		
	LEADER Are leaders ready, willing, and able to enforce standards required to control hazard?																		
	INDIVIDUAL Is soldier performance sufficiently self-disciplined to control hazard?																		

- Answer
- If all the hazards are “yes,” no further action required.
 - If one or more of the hazards are “no,” risk-manage the hazards.

Note: Use as many sheets as you need to list all of the hazards in Block F of your Risk Management Worksheet.

**SOLUTION FOR
PRACTICAL EXERCISE PE-2**

The possible answers to Practical Exercise 2 (Risk Management Worksheet) are as follows: (Note: Your answers may be different than those listed below).

RISK MANAGEMENT WORKSHEET					
A. Mission or Task: <i>Secure Battalion TACCP Site</i>		B. Date/Time Group: Begin: 060700AJUNYY End: 061800AJUNYY		C. Date Prepared: 05 JUN YY	
D. Prepared By: (Rank, Last Name, Duty Position)					
E. Task	F: Identify Hazards	G: Assess Hazards	H. Develop Controls	I: Determine Residual Risk	J: Implement Controls ("How To")
<i>Conduct Tactical Road-march</i>	Hot Weather (Injuries)	E	DO	NOT	USE
	Equipment Load	H			
	New Soldiers	E			
	Wildlife (Snakes)	M			
	Blistered Feet	M			
	Uneven Terrain	M			
	Noise Discipline	L			
	Enemy Presence Water Intake	E E			
K. Determine overall mission/task risk level after controls are implemented (circle one):					
LOW (L)		MODERATE (M)		HIGH (H)	
EXTREMELY HIGH (E)					

NOTE: Upon completion of blocks H, I, and J (implementing the controls for each hazard listed) you would then determine the overall mission/task risk level and circle one of the selections in block K.

HAZARD DETERMINATION CHART:

There is no school solution for the hazard determination chart at C-12, however here is a **sample** of what a finished product may look like.

LIST EACH HAZARD IN A SEPARATE SPACE TO THE RIGHT (from block F of the Risk Management Worksheet at C-12).



Question: Can you adequately control the hazard?

	Hot Weather (Injuries)	Equipment Load	New Soldiers	Wildlife (Snakes)	Blistered Feet	Uneven Terrain	Noise Discipline	Enemy Presence	Water Intake	
	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	
	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	
Identified METT-T Hazards	<p>YOU SHOULD HAVE A CHECK MARK (OR "X") IN THE APPROPRIATE (YES or NO) BLOCKS INDICATING THAT YOU CONSIDER A PARTICULAR HAZARD AS ADEQUATELY CONTROLLED OR NOT.</p>									
										SUPPORT – Is support available (personnel, equipment, supplies, facilities) adequate to control the hazard?
										STANDARDS – Are procedures or guidance adequately clear, practical, and specific to control hazard?
										TRAINING Is training adequate to control the hazard?
	LEADER Are leaders ready, willing, and able to enforce standards required to control hazard?									
INDIVIDUAL Is soldier performance sufficiently self-disciplined to control hazard?										

- Answer: - If all the hazards are “yes,” no further action required.
 - If one or more of the hazards are “no,” risk-manage the hazards.

Note: Use as many sheets as you need to list all of the hazards in Block F of your Risk Management Worksheet.

HANDOUTS FOR LESSON 1: T421 version 1

**This Appendix
Contains**

This Appendix contains the items listed in this table---

Title/Synopsis	Pages
SH-1, Advance Sheet	SH-1-1 and SH-1-2
SH-2, Extract from FM 100-14	SH-2-1 thru SH-2-62
SH-3, Case Study	SH-3-1 thru SH-3-4

Student Handout 1

This student handout contains the Advance Sheet.

Student Handout 1

Advance Sheet

Lesson Hours

This lesson consists of two hours of small group instruction.

Overview

Soldiering is a demanding and risky business. Every mission, training or combat, is a fight against two enemies. One enemy is the opposing forces (OPFOR); the other is accidents. Both can strike without warning and produce terrible effects. The risk management process is also key to protection of your soldiers and their equipment from mission ending accidents.

Learning Objectives

Terminal Learning Objective (TLO).

Action:	Verify the implementation of the risk management process at platoon level.
Conditions:	As a platoon sergeant, in a classroom, given FM 100-14.
Standard:	Verified the implementation of the risk management process at company level IAW FM 100-14.

Enabling Learning Objectives (ELOs).

ELO A: Identify elements of a risk assessment.

ELO B: Identify controls for implementation of a risk assessment.

ELO C: Identify methods to monitor the controls implemented for a risk assessment.

Assignment

The student assignments for this lesson are:

- Study FM 100-14 (SH-2), chapters 1, 2, appendix, and glossary.
 - Study Case Study 1 in SH-3 (for discussion in class).
 - Skim FM 100-14 (SH-2), chapter 3.
-

Additional Subject Area Resources

None

Bring to Class

- Student Handouts.
-

Student Handout 2

This student handout contains an extract from FM 100-14.

Chapter 2

Risk Management Process

First reckon, then risk

Field Marshal Helmuth von Moltke

This chapter provides the essence of the five-step risk management process. It illustrates the application of each step to military operations through the factors of METT-T.

THE FIVE STEPS: AN OVERVIEW

Risk management is the process of identifying and controlling hazards to conserve combat power and resources. The five steps of risk management are—

- Step 1. Identify hazards.
- Step 2. Assess hazards to determine risks.
- Step 3. Develop controls and make risk decisions.
- Step 4. Implement controls.
- Step 5. Supervise and evaluate.

This five-step process is integrated into the military decision-making process as shown in Figure 2-1.

FM 100-40 provides insight into the context in which the risk management process is applied herein. Areas of particular interest in FM 100-40 include—

- Solving tactical problems (Chapter 1).
- The science and art of tactics (Chapter 1).
- Hasty versus deliberate operations (Chapter 1).
- The plan-prepare-execute cycle (Chapter 1).
- Basic tactical control measures (Chapter 2).
- The factors of METT-T (Chapter 2).

Military Decision-Making Process	Risk Management Steps				
	Step 1 Identify Hazards	Step 2 Assess Hazards	Step 3 Develop Controls and Make Risk Decision	Step 4 Implement Controls	Step 5 Supervise and Evaluate
Mission Receipt	X				
Mission Analysis	X	X			
COA Development	X	X	X		
COA Analysis	X	X	X		
COA Comparison			X		
COA Approval			X		
Orders Production				X	
Rehearsal ¹	X	X	X	X	X
Execution and Assessment ¹	X	X	X	X	X

¹All boxes are marked to emphasize the continued use of the risk management process throughout the mission

Figure 2-1. Risk Management Steps Correlated with Military Decision-Making Tasks

Risk decisions should be based upon awareness rather than mechanical habit. Leaders should act on a keen appreciation for the essential factors that make each situation unique instead of from conditioned response. Throughout the entire operational continuum, the commander must consider US Government civilians and contract support personnel in his risk management process. Hazards can exist, regardless of enemy or adversary actions, in areas with no direct enemy contact and in areas outside the enemy's or adversary's

influence. The two types of risk that exist across the wide range of Army operations are *tactical risks* and *accident risks*.

- *Tactical risk* is risk concerned with hazards that exist because of the presence of either the enemy or an adversary. It applies to all levels of war and across the spectrum of operations.
- *Accident risk* includes all operational risk considerations other than tactical risk. It includes risks to the friendly force. It also includes risks posed to civilians by an operation, as well as an operations impact on the environment. It can include activities associated with hazards concerning friendly personnel, civilians, equipment readiness, and environmental conditions.

STEPS 1 AND 2

Steps 1 and 2 together comprise the risk assessment. In Step 1, individuals identify the hazards that may be encountered in executing a mission. In Step 2, they determine the direct impact of each hazard on the operation. The risk assessment provides for enhanced situational awareness. This awareness builds confidence and allows soldiers and units to take timely, efficient, and effective protective measures.

STEPS 3 THROUGH 5

Steps 3 through 5 are the essential follow-through actions to effectively manage risk. In these steps, leaders balance risk against costs—political, economic, environmental, and to combat power—and take appropriate actions to eliminate unnecessary risk. During execution, as well as during planning and preparation, leaders continuously assess the risk to the overall mission and to those involved in the task. Finally, leaders and individuals evaluate the effectiveness of controls and provide lessons learned so that others may benefit from the experience.

THE FIVE STEPS APPLIED

STEP 1. IDENTIFY HAZARDS

A *hazard* is an actual or potential condition where the following can occur due to exposure to the hazard:

- Injury, illness, or death of personnel.
- Damage to or loss of equipment and property.
- Mission degradation.

Hazards are sources of danger or risks due to enemy or adversary presence and other conditions not due to enemy or adversary capabilities. Hazards are found in all operational environments. Combat operations, stability operations, base support operations, and training present unique hazards for units involved in these kinds of missions. Hazards are identified during the first four steps of the military decision-making process: *mission receipt*, *mission analysis*, *COA development*, and *COA analysis*.

The ability of unit leaders and staffs to identify hazards is key. One reality of today's missions is that the aspect of a hazard can change rapidly. Things of little risk initially can quickly become major threats due to unforeseen natural or man-made events. Leaders should be aware of this possibility. Complacency to the fact that existing controls may not continue to control hazards in rapidly changing situations should be viewed as a hazard in itself.

The factors of METT-T provide a sound framework for identifying hazards when planning, preparing, and executing operations. When applying risk management to METT-T during mission analysis, leaders and staffs should look for hazards that affect both tactical and accident risks. They must identify all hazards that may present significant risks to the mission.

Mission

Leaders first analyze the assigned mission. They look at the type of mission to be accomplished and consider possible subsequent missions. Certain kinds of operations are inherently more dangerous than others. For example, a deliberate frontal attack, because of the associated movement, is more likely to expose a unit to losses than would a defense from prepared positions. Identifying missions that routinely present great risk is imperative. Leaders also look for hazards associated with complexity of the plan such as—

- A scheme of maneuver that is difficult to understand or too complex for accurate communications down to the lowest level.
- The impact of operating under a fragmentary order (FRAGO).

Enemy

Commanders look for enemy capabilities that pose significant hazards to the operation. For example, "What can the enemy do to

defeat my operation?” Common shortfalls that can create hazards during operations against an enemy include failure to—

- Assess potential advantages to the enemy provided by the battlefield environment.
- Fully assess the enemy’s capabilities.
- Understand enemy collection capabilities and friendly vulnerabilities to those capabilities.
- Accurately determine the enemy’s probable COAs.
- Plan and coordinate active ground and aerial reconnaissance activities.
- Disseminate intelligence about the enemy to lower levels.
- Identifying terrorist threats and capabilities.

Intelligence plays a critical part in identifying hazards associated with tactical risk. Intelligence-preparation-of-the-battlefield (IPB) is a dynamic staff process that continually integrates new information and intelligence that ultimately becomes input to the commander’s risk assessment process. Intelligence assists in identifying hazards during operations by—

- Identifying the opportunities and constraints the battlefield environment offers to threat and friendly forces.
- Thoroughly portraying threat capabilities and vulnerabilities.
- Collecting information on populations, governments, and infrastructures.

FMs 34-130 and 34-60, respectively, provide detailed information on IPB and on counterintelligence operations and multidiscipline counterintelligence analysis.

Terrain and Weather

In addition to those due to the enemy or adversaries, the most obvious hazards to military operations are due to terrain and weather. Terrain and weather affect the type of hazard encountered. When the enemy uses terrain to his advantage, the risk is clearly tactical. The aspects of terrain and weather may create situations where accident risks predominate. When looking at this from a purely mission perspective, familiarity of the unit with the terrain and its associated environment must be paramount. Basic issues include—

- How long the unit has operated in the environment and climate.
- Whether the terrain has been crossed before.

Terrain. The five main military aspects of terrain—*observation and fields of fire, cover and concealment, obstacles, key terrain and decisive terrain, and avenues of approach (OCOKA)*—can be used to identify and assess hazards impacting on friendly forces. Chapter 2 of FM 100-40 has details on OCOKA. The terrain analysis includes both map and on-the-ground reconnaissance to identify how well unit capabilities and mission demands can be accommodated by the terrain.

- *Observation and fields of fire.* Hazards associated with this usually involve when the enemy will be able to engage a friendly unit and when friendly unit weapons capabilities allow it to effectively engage the enemy.
- *Cover and concealment.* Hazards associated with cover and concealment are created by the enemy's ability to place direct or indirect fire on friendly forces.
- *Obstacles.* Hazards associated with obstacles may be accident or tactical. They may be due to natural conditions such as rivers or swamps or man-made such as minefields or built-up areas.
- *Key terrain and decisive terrain.* Hazards are a marked advantage terrain provides to the enemy if he controls such terrain or denies its use to friendly forces.
- *Avenues of approach.* Hazards associated with avenues of approach can affect both tactical and accident risks. Such hazards include conditions where an avenue of approach impedes deployment of friendly combat power or where it supports deployment of enemy combat power.

Weather. Weather works hand-in-hand with terrain to create hazards. To identify weather hazards, leaders and soldiers must assess the impact on operating systems. Mistakes include not considering the—

- Adverse effects of heat and cold hazards on the performance of soldiers.
- Effects of climate and weather on maintenance of vehicles and equipment before beginning an operation.
- Hazardous effects of weather on the five military aspects of terrain.

Troops

Leaders analyze the capabilities of available friendly troops. Associated hazards impact both the soldier and unit. Key considerations are level of training, manning levels, the condition and maintenance of vehicles and equipment, morale, availability of supplies and services, and the physical and emotional health of soldiers. Leaders and soldiers must be vigilant to the fact that hazards in these areas can adversely affect a mission, even when all tactical considerations point to success. Mission failure can be caused by—

- *Hazards to the physical and emotional health of soldiers.* Inadequate sanitation facilities, water purification capabilities, medical attention, and evacuation capabilities are key hazards that can arise from incomplete logistical planning. Care of troops requires long-range projections of all classes of supply, with close monitoring of mission changes that could impact availability or depletion of supplies. When beginning an operation immediately upon arriving in theater, hazards include not implementing measures to help soldiers overcome fatigue or acclimatize them to the geographical area and associated climate.
- *Hazards to task organization or units participating in an operation.* Hazards include how long units have worked together under a particular command relationship. During stability operations, task organizations may change often. Hazards include poor communication, unfamiliarity with higher headquarters SOPs, and insufficient combat power to accomplish the mission.
- *Hazards associated with long-term missions.* Long-term missions include nation building, peacekeeping, or insurgency/counterinsurgency operations. Hazards associated with these missions include the turmoil of personnel turnover, lack of continuity of leadership, inexperience, and lack of knowledge of the situation and the unit's operating procedures. An especially insidious hazard is critical-skills atrophy that results from not performing METL-related missions.

Time Available

The hazard is insufficient time to plan, prepare, and execute operations. Planning time is always at a premium. Leaders routinely apply the one-third/two-thirds rule to ensure their subordinate units are given maximum time to plan. Failure to accomplish a mission on

time can result in shortages of time for subordinate and adjacent units to accomplish their mission.

Civilians

The commander's legal responsibility is to consider hazards to, and safeguarding of, civilians in his area of operations. *Civilians* include nongovernmental organizations (NGOs), private voluntary organizations (PVOs), US Government civilians, foreign national civilians, the media, and dislocated civilians put at risk by military operations. The commander must consider hazards that can occur across the range of operations, such as—

- *In a wartime environment.* The commander must consider the hazard of collateral damage which may result in creating new adversaries.
- *In a peacetime environment.* The commander must consider the political attitudes and previous actions of civilians in identifying hazards to friendly forces and the populace itself.

Adversaries are hostile elements other than the enemy that may be encountered during any operation. They present additional hazards. They may be organized opposition or individuals that challenge authority. They may include such diverse elements as rioters, criminals, rogues, or gangs that might want to harass a peace enforcement mission.

STEP 2. ASSESS HAZARDS

Step 2 completes the risk assessment. Risk is the chance of hazard or bad consequences. This step examines each hazard in terms of probability and severity to determine the risk level of one or more hazardous incidents that can result from exposure to the hazard. This step is conducted during three steps of the military decision-making process—*mission analysis*, *COA development*, and *COA analysis*. This step is also conducted after controls are developed.

The incident must be credible in that it must have a reasonable expectation of happening. The end result is an estimate of risk from each hazard and an estimate of the overall risk to the mission caused by hazards that cannot be eliminated. Leaders must also assess the risk to civilians posed by the operation. They may need to assess the operations' impact on the environment. This step is conducted in three substeps.

Substep A

Leaders and staffs assess each hazard in relation to the *probability* of a hazardous incident. The probability levels estimated for each hazard may be based on the mission, COAs being developed and analyzed, or frequency of a similar event. Figure 2-2 provides a summary of the five degrees of probability. The letters in parentheses following each degree (A through E) provide a symbol for depicting probability. For example, the letter *A* represents *frequent* probability.

FREQUENT (A) Occurs very often, continuously experienced	
Single item	Occurs very often in service life. Expected to occur several times over duration of a specific mission or operation. Always occurs.
Fleet or inventory of items	Occurs continuously during a specific mission or operation, or over a service life.
Individual soldier	Occurs very often in career. Expected to occur several times during mission or operation. Always occurs.
All soldiers exposed	Occurs continuously during a specific mission or operation.
LIKELY (B) Occurs several times	
Single item	Occurs several times in service life. Expected to occur during a specific mission or operation.
Fleet or inventory of items	Occurs at a high rate, but experienced intermittently (regular intervals, generally often.).
Individual soldier	Occurs several times in career. Expected to occur during a specific mission or operation.
All soldiers exposed	Occurs at a high rate, but experienced intermittently.
OCCASIONAL (C) Occurs sporadically	
Single item	Occurs some time in service life. May occur about as often as not during a specific mission or operation.
Fleet or inventory of items	Occurs several times in service life.
Individual soldier	Occurs some time in career. May occur during a specific mission or operation, but not often.
All soldiers exposed	Occurs sporadically (irregularly, sparsely, or sometimes).

Figure 2-2. Hazard Probability

SELDOM (D) Remotely possible; could occur at some time	
Single item	Occurs in service life, but only remotely possible. Not expected to occur during a specific mission or operation.
Fleet or inventory of items	Occurs as isolated incidents. Possible to occur some time in service life, but rarely. Usually does not occur.
Individual soldier	Occurs as isolated incident during a career. Remotely possible, but not expected to occur during a specific mission or operation.
All soldiers exposed	Occurs rarely within exposed population as isolated incidents.
UNLIKELY (E) Can assume will not occur, but not impossible	
Single item	Occurrence not impossible, but can assume will almost never occur in service life. Can assume will not occur during a specific mission or operation.
Fleet or inventory of items	Occurs very rarely (almost never or improbable). Incidents may occur over service life.
Individual soldier	Occurrence not impossible, but may assume will not occur in career or during a specific mission or operation.
All soldiers exposed	Occurs very rarely, but not impossible.

Figure 2-2. Hazard Probability (continued)

Substep B

Substep B addresses the *severity* of each hazard. It is expressed in terms of—

- Degree of injury or illness.
- Loss of or damage to equipment or property.
- Environmental damage.
- Other mission-impairing factors such as lost combat power.

The degree of severity estimated for each hazard may be based on knowledge of the results of similar past events. Figure 2-3 provides a summary of the four degrees of hazard severity. The Roman numerals in parentheses following each degree (I through IV) provide a convenient symbol for depicting severity. For example, *I* represents the *catastrophic* degree of severity.

CATASTROPHIC (I)	Loss of ability to accomplish the mission or mission failure. Death or permanent total disability (accident risk). Loss of major or mission-critical system or equipment. Major property (facility) damage. Severe environmental damage. Mission-critical security failure. Unacceptable collateral damage.
CRITICAL (II)	Significantly (severely) degraded mission capability or unit readiness. Permanent partial disability, temporary total disability exceeding 3 months time (accident risk). Extensive (major) damage to equipment or systems. Significant damage to property or the environment. Security failure. Significant collateral damage.
MARGINAL (III)	Degraded mission capability or unit readiness. Minor damage to equipment or systems, property, or the environment. Lost day due to injury or illness not exceeding 3 months (accident risk). Minor damage to property or the environment.
NEGLIGIBLE (IV)	Little or no adverse impact on mission capability. First aid or minor medical treatment (accident risk). Slight equipment or system damage, but fully functional and serviceable. Little or no property or environmental damage.

Figure 2-3. Hazard Severity

Substep C

In this substep leaders and staffs expand what they understand about probable hazardous incidents into estimates of levels of risk for each identified hazard and an estimate of the overall risk for the operation. Estimating risk follows from examining the outcomes of Substeps A and B; that is, both the probability and severity of hazardous incidents. This substep is more art than science. Much depends on the use of historical lessons learned, intuitive analysis,

experience, and judgment. Uncertainty can arise in the assessment of both the probability and severity of a hazardous incident. Uncertainty results from unknowns about a situation; from incomplete, inaccurate, undependable, or contradictory information; and from unforeseen circumstances. Therefore, assessment of risk requires good judgment.

Figure 2-4 is a standardized matrix that can be used to assist in this process. Leaders and staffs enter the estimated degree of severity and probability for each hazard in Substeps A and B from the severity row and probability column, respectively. The point where the severity row and probability column intersect defines the level of risk. For example, if the hazard is estimated to have a *critical* severity (II) and a *likely* probability (B), the level of risk is high (H).

Figure 2-5 provides a summary of the levels of risk. It also provides examples of hazardous incidents for each risk level. Several examples illustrate the trade-off between tactical and accident risks.

Risk Assessment Matrix						
		Probability				
Severity		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
Catastrophic	I	E	E	H	H	M
Critical	II	E	H	H	M	L
Marginal	III	H	M	M	L	L
Negligible	IV	M	L	L	L	L

E – Extremely High Risk
 H – High Risk
 M – Moderate Risk
 L – Low Risk

Figure 2-4. Risk Assessment Matrix

E - Extremely High: Loss of ability to accomplish the mission if hazards occur during mission. A *frequent* or likely probability of catastrophic loss (IA or IB) or *frequent* probability of *critical* loss (IIA) exists.

Example: A commander finds that one of his implied tasks to attack an objective involves crossing a normally shallow riverbed. After looking at the factors of METT-T, he discovers that three days of intense rain have raised the water level to rise above flood stage, with currents far in excess of his ability to safely ford with armored vehicles. After discussing COAs with his staff, he determines the accident risk is extremely high because of the likely probability and catastrophic severity of losing vehicles and killing soldiers. His conclusions are based on his experience with and knowledge of fording armored vehicles under the existing conditions of water depth and current speed.

H - High: Significant degradation of mission capabilities in terms of the required mission standard, inability to accomplish all parts of the mission, or inability to complete the mission to standard if hazards occur during the mission. *Occasional* to *seldom* probability of catastrophic loss (IC or ID) exists. A *likely* to *occasional* probability exists of a critical loss (IIB or IIC) occurring. *Frequent* probability of *marginal* losses (IIIA) exists.

Example: During a preplanned ambush, the leader discovers that the force he intends to ambush has significantly more combat power than his own force can accommodate. He realizes that he could only delay rather than destroy the enemy. He knows his casualty estimates would be very high if the enemy reorganized and counterattacked. He also knows that the size of the enemy force could seriously impact adjacent units conducting a movement to contact. He determines the situation is *high risk* because he estimates (based on his training and experience) there is a likely probability of the enemy reorganizing and counterattacking and the severity of loss to his unit would be critical.

M - Moderate: Expected degraded mission capabilities in terms of the required mission standard will have a reduced mission capability if hazards occur during mission. An *unlikely* probability of catastrophic loss (IE) exists. The probability of a *critical* loss is *seldom* (IID). *Marginal* losses occur with a *likely* or *occasional* probability (IIIB or IIIC). A *frequent* probability of negligible (IVA) losses exists.

Example: A commander in a defensive position receives a warning order to be prepared to counterattack if the enemy attacks again. He chooses to use pre-positioned ammunition caches to support his defense, as opposed to moving his ammunition resupply forward by truck. He determines that the severity of not having an immediate resupply of ammunition available during the counterattack will have a *critical* impact on his combat power. He realizes that if the enemy forces him to abandon his forward positions, the severity of the loss of his

Figure 2-5. Levels of Risk

ammunition caches will critically impact his combat power. He considers that his unit is deployed in excellent defensive positions. He has repelled two attacks that resulted in the destruction of an estimated 50 percent of the enemy's combat power. He receives information that the probability of the enemy attacking is *likely*, but that the probability of the enemy being reinforced and attacking in overwhelming force is remote (*seldom*). The commander concludes that the risk of conducting a counterattack with limited ammunition is greater than the *moderate* risk of the enemy pushing him back.

L - Low: Expected losses have little or no impact on accomplishing the mission. The probability of *critical* loss is *unlikely* (IIE), while that of *marginal* loss is *seldom* (IIID) or *unlikely* (IIIE). The probability of a *negligible* loss is *likely* or *less* (IVB through (IVE).

Example: A mechanized task force (TF) conducting a movement to contact in a desert environment is overtaken by nightfall before reaching its limit of advance (LOA). The terrain along the axis of advance is flat and open. Visibility is about 800 meters under a clear sky illuminated by a full moon. Estimates put the enemy, which has been hastily withdrawing for the past three days, at approximately 30 percent strength. Contact has been light with no defensible terrain along the TF's axis. The TF commander considers all the factors. In addition, the TF is 100 percent operational in using night vision devices. The TF commander estimates that it is *unlikely* that his unit will incur losses of *critical* severity by being surprised by the enemy or lose *critical* combat power due to an accident. He estimates the risk to his force in continuing a nighttime movement is *low*.

Figure 2-5. Levels of Risk (continued)

STEP 3. DEVELOP CONTROLS AND MAKE RISK DECISIONS

Risk management is the recognition that decision making occurs under conditions of uncertainty. Decisions must remain consistent with the commander's stated intent and offer a good expectation of success. The risk-taking skill requires competency as a prerequisite.

FM 100-7, Decisive Force:
The Army in Theater Operations, May 1995

Step 3 is accomplished in two substeps: develop controls and make risk decisions. This is done during the COA development, COA analysis, COA comparison, and COA approval of the military decision-making process.

Substep A - Develop Controls

After assessing each hazard, leaders develop one or more controls that either eliminate the hazard or reduce the risk (probability and/or

severity) of a hazardous incident. When developing controls, they consider the reason for the hazard not just the hazard itself.

Types of Control Controls can take many forms, but fall into three basic categories—*educational controls*, *physical controls*, and *avoidance*.

- *Educational controls*. These controls are based on the knowledge and skills of the units and individuals. Effective control is implemented through individual and collective training that ensures performance to standard.
- *Physical controls*. These controls may take the form of barriers and guards or signs to warn individuals and units that a hazard exists. Additionally, special controller or oversight personnel responsible for locating specific hazards fall into this category.
- *Avoidance*. These controls are applied when leaders take positive action to prevent contact with an identified hazard.

Criteria for Control To be effective, each control developed must meet the following criteria:

- *Suitability*. It must remove the hazard or mitigate (reduce) the residual risk to an acceptable level.
- *Feasibility*. The unit must have the capability to implement the control.
- *Acceptability*. The benefit gained by implementing the control must justify the cost in resources and time. The assessment of acceptability is largely subjective. Figure 2-6 gives criteria for determining acceptability of controls for each identified hazard.

Support	Availability of adequate personnel, equipment, supplies, and facilities necessary to implement a suitable controls.
Standards	Guidance and procedures for implementing a control are clear, practical, and specific.
Training	Knowledge and skills are adequate to implement a control.
Leadership	Leaders are competent to implement a control.
Individual	Individual soldiers are sufficiently self-disciplined to implement a control.

Figure 2-6. Criteria for Determining Acceptability of Controls

Examples of Controls. Examples of controls include—

- Engineering or designing to eliminate or control hazards.
- Selecting a COA that avoids identified hazards.
- Limiting the number of people and the amount of time they are exposed to hazards, consistent with mission requirements.
- Selecting personnel with appropriate mental, emotional, and physical capabilities.
- Providing protective clothing, equipment, and safety and security devices.
- Providing such services as adequate sanitation facilities and water purification capabilities.
- Providing warning signs and signals.
- Scheduling vehicle and aircraft silhouette drills.
- Planning training, including rehearsals, rock drills, battle drills, and so forth.
- Programming communications links for key civilian organizations.
- Establishing battlefield controls such as areas of operations and boundaries, direct fire control measures, fire support coordination measures, rules of engagement, airspace control measures, bridge classification, traffic control, and so forth.
- Developing terrorist attack warning systems and response plans.

The key is to specify who, what, where, when, and how each control is to be used. For example—

- Planning and scheduling intensive threat and friendly vehicle identification refresher training for all antiarmor and air defense weapons crews before the mission reduces the probability of engaging a friendly vehicle or aircraft (fratricide).
- Programming installation of crashworthy passenger seats in the UH-60 Blackhawk, when mission circumstances do not indicate their removal, can reduce the severity of injuries in crashes.
- Requiring soldiers to wear flak vests and helmets during movement to contact, or when riding in vehicles in areas where enemy fire is likely, can reduce the probability and severity of a wound from small arms fire or fragments.

- Establishing strong continuity documents and planning overlap tours for key leaders facilitate smooth transitions during extended operations.

Residual Risk Once the responsible leader develops and accepts controls, he determines the residual risk associated with each hazard and the overall residual risk for the mission.

- *Residual risk* is the risk remaining after controls have been selected for the hazard. Residual risk is valid (true) only if the controls for it are implemented. As controls for hazards are identified and selected, the hazards are reassessed as in Step 2 and the level of risk is then revised. This process is repeated until the level of residual risk is acceptable to the commander or leader or cannot be further reduced. See Figures A-3 through A-5.
- *Overall residual risk* of a mission must be determined when more than one hazard is identified. The residual risk for each of these hazards may have a different level, depending on the assessed probability and severity of the hazardous incident. Overall residual mission risk should be determined based on the incident having the greatest residual risk. Determining overall mission risk by averaging the risks of all hazards is not valid. If one hazard has high risk, the overall residual risk of the mission is high, no matter how many moderate or low risk hazards are present.

Substep B - Make Risk Decision

A key element of the risk decision is determining if the risk is justified. The commander must compare and balance the risk against mission expectations. He alone decides if controls are sufficient and acceptable and whether to accept the resulting residual risk. If he determines the risk level is too high, he directs the development of additional controls or alternate controls, or he modifies, changes, or rejects the COA.

Leaders can use the risk assessment matrix in Figure 2-4—in conjunction with their commanders' guidance—to communicate how much risk they are willing to delegate. For example, a commander may place constraints on his subordinates that restrict their freedom of action to accept risk in instances where the risk might imperil his intent, his higher commander's intent, or a critical capability of the unit.

STEP 4. IMPLEMENT CONTROLS

Leaders and staffs ensure that controls are integrated into SOPs, written and verbal orders, mission briefings, and staff estimates. The critical check for this step, with oversight, is to ensure that controls are converted into clear, simple execution orders understood at all levels. Implementing controls includes coordination and communication with—

- Appropriate superior, adjacent, and subordinate units and those executing the mission.
- Logistics Civil Augmentation Program (LOGCAP) organizations and civilian agencies that are part of the force.

The media, NGOs, and PVOs must be included in coordination when their presence impacts or is impacted by the force.

Leaders must explain how supervisors will implement controls. Examples of control implementation include—

- Conducting vehicle and aircraft silhouette drills.
- Conducting rehearsals, rock drills, battle drills, and so forth.
- Conducting intensive threat and friendly vehicle identification refresher training for all antiarmor and air defense weapons crews.
- Conducting orientation for replacement personnel.
- Installing and maintaining communications links for key civilian organizations.
- Operating in convoys of four vehicles minimum.
- Carrying weapons and wearing flak jackets and helmets when outside secure compounds.

STEP 5. SUPERVISE AND EVALUATE

Leaders must supervise the execution of their orders. The more untrained the troops, the more detailed this supervision must be.

Infantry in Battle, 1939

During mission preparation and execution, leaders must ensure that their subordinates understand how to execute risk controls. Leaders continuously assess risks during the conduct of operations,

especially during long-term missions. Leaders maintain situational awareness. They guard against complacency to ensure that risk control standards are not relaxed or violated. To gain insight into areas needing improvement, leaders must continuously evaluate their units' effectiveness in managing mission risks.

Supervise

Leaders supervise mission rehearsal and execution to ensure standards and controls are enforced. Techniques may include spot-checks, inspections, situation reports and brief-backs, buddy checks, and close supervision. During the mission, leaders continuously monitor controls to ensure they remain effective. They modify them as necessary. Leaders and individuals anticipate, identify, and assess new hazards to implement controls. They continually assess variable hazards such as fatigue, equipment serviceability, and the environment. Leaders modify controls to keep risks at an acceptable level.

During sustained operations, leaders continue planning to ensure that controls emplaced at the beginning of the mission apply to changes in the operation's current situation and to hazardous conditions. Leaders must maintain an extraordinary degree of discipline. They must avoid complacency, which can result from boredom and overconfidence. Leaders must ensure that soldiers do not relax their vigilance due to performing repetitive tasks—despite changing roles and missions, unit turbulence and turnover, and declining skills. Leaders maintain a close overwatch on controls put in place to reduce risks over a prolonged period. For example, during stability operations, land mine hazards may not be solved in the near term, but may require continual attention. Other examples of long-term hazards that may be encountered include—

- Climatic extremes.
- NBC and hazardous waste contamination.
- Diseases native to a particular area of operation or indigenous population.
- Terrorist threats.

Evaluate

After a mission, leaders and individuals evaluate how well the risk management process was executed. They—

- Determine how to ensure that successes are continued to the next mission.

- Capture and disseminate lessons learned so that others may benefit from the experience.
- Consider the effectiveness of the risk assessment in identifying and accurately assessing the probability and severity of hazards that resulted in mission degradation.
- Determine whether the level of residual risk of each hazard and of the overall mission were accurately estimated.
- Evaluate the effectiveness of each control in reducing or removing risk, including whether controls were effectively communicated, implemented and enforced.

Leaders and individuals determine why some controls were ineffective and what should be done when the hazard is encountered again. A control may be altered; the way it is implemented or supervised may be changed to make it effective; or a completely different control may be more effective. Leaders must energize the system to fix systemic problems that hinder combat effectiveness.

Figure 2-7 shows that the risk management process continues throughout a mission as well as from mission to mission. It is integral to the military decision-making process. Its application requires good judgment and intuitive analysis borne of confidence, experience, and situational awareness.

TOOLS AND PITFALLS

The appendix provides examples of risk management tools to help leaders assess identified hazards, develop controls, and make risk decisions. The tools should be tailored to suit particular situations and missions. The examples in Figures A-3 through A-5 are tools to manage risk at the tactical level. The example in Figure A-6 is a tool to manage risk at the operational level. Units may develop additional tools suitable for their needs.

Units train to a standard. They operate and train regardless of the degree of real or perceived difficulty. Risk reduction begins with commanders identifying their METLs. Commanders use the risk management process to assess the degree of risk related to each METL their unit must perform. From this assessment, risk reducing standard operating procedures evolve.

Figure A-7 provides an example of risk management considerations integrated into a mission training plan (MTP) task.

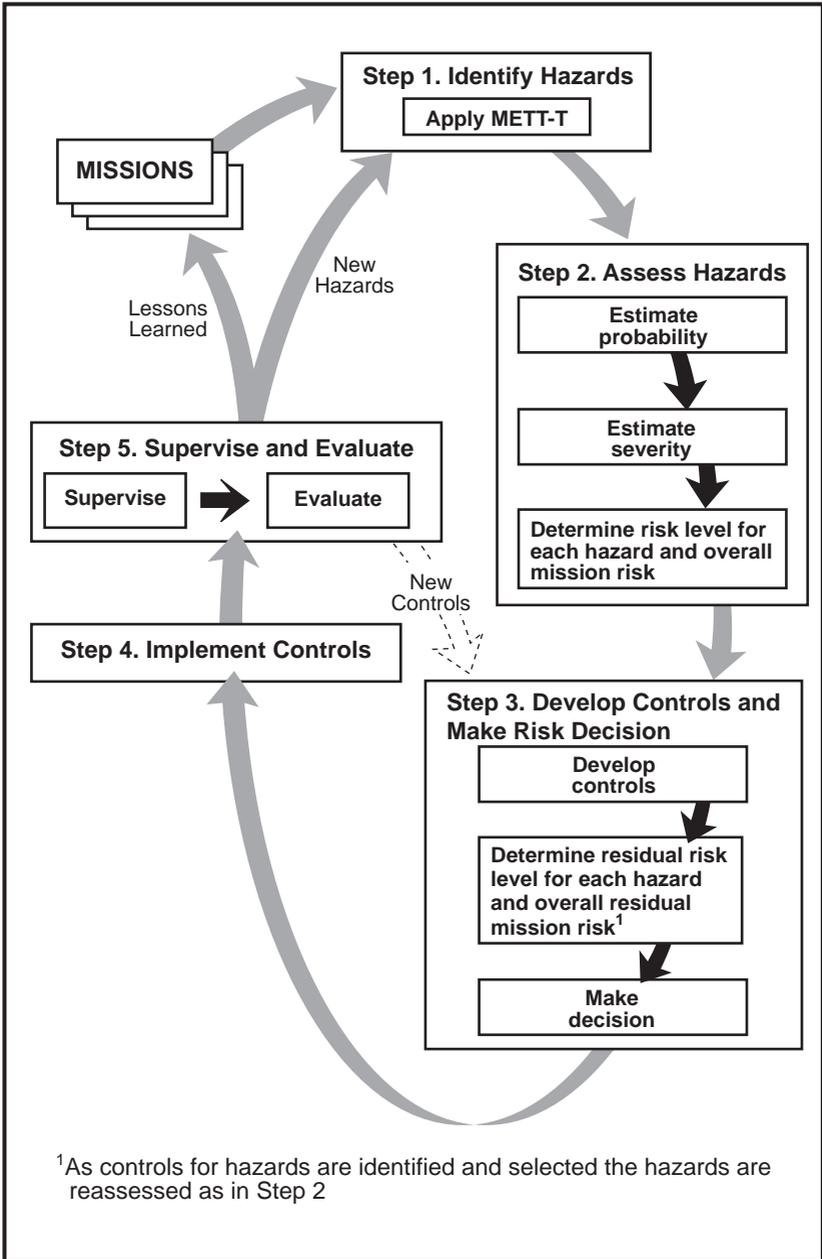


Figure 2-7. Continuous Application of Risk Management

Pitfalls arise when risk management tools are used without adaptation to the factors of METT-T. Using a standardized risk assessment card or checklist may be of some value initially in the mission analysis and COA development or in cases where a routine task is performed in an unchanging environment or static situation. However, such a tool used alone will not likely identify all hazards for every mission in a changing operational environment.

Completing the risk assessment alone, but failing to identify effective controls, usually results in a GO or NO-GO decision based on the initial risk. If the risk assessment does not accurately identify the hazards and determine the level of residual risk, the leader is likely to make his risk decision based upon incomplete or inaccurate information. If the risk assessment places missions in a routine, low-risk category, the commander may not be informed of a risk decision resulting in an accepted risk level that could imperil his or his higher commander's intent or other affected organizations. The risk management process is intended to provide reasonable controls to support mission accomplishment without exposing the force to unnecessary residual risk.

Appendix

Examples of Risk Management Application

The examples in this appendix are designed to help those charged with managing risk.

TRACKING TOOL

The work sheet instructions are in Figure A-1.

Work Sheet Instructions	
Block	
A – D	Self explanatory
E	Identify task relating to the mission or task in Block A
F	Identify Hazards – Identify hazards by reviewing METT-T factors for the mission or task. Additional factors include historical lessons learned, experience, judgment, equipment characteristics and warnings, and environmental considerations.
G	Assess Hazards – Assessment includes historical lessons learned, intuitive analyses, experience, judgment, equipment characteristics and warnings, and environmental considerations. Determine initial risk for each hazard by applying risk assessment matrix (Figure 2-4). Enter the risk level for each hazard.
H	Develop Controls – Develop one or more controls for each hazard that will either eliminate the hazard or reduce the risk (probability and/or severity) of a hazardous incident. Specify who, what, where, why, when, and how for each control. Enter controls.
I	Determine Residual Risk – Determine the residual risk for each hazard by applying the risk assessment matrix (Figure 2-4). Enter the residual risk level for each hazard.
J	Implement Controls – Decide how each control will be put into effect or communicated to the personnel who will make it happen (written or verbal instruction; tactical, safety, garrison SOPs, rehearsals). Enter controls.
K	Determine Overall Mission/Task Risk – Select the highest residual risk level and circle it. This becomes the overall mission or task risk level. The commander decides whether the controls are sufficient to accept the level of residual risk. If the risk is too great to continue the mission or task, the commander directs development of additional controls or modifies, changes, or rejects the COA.
	Supervise and Evaluate – This last step is not on the worksheet. Plan how each control will be monitored for implementation (continuous supervision, spot-checks) and reassess hazards as the situation changes. Determine if the controls worked and if they can be improved. Pass on lessons learned.

Figure A-1. Risk Management Work Sheet Instructions

The work sheet (Figure A-2) provides a starting point to logically track the process of hazards and risks. It can be used to document risk management steps taken during planning, preparation, and execution of training and combat missions and tasks.

A. Mission or Task:		B. Date/Time Group Begin: End:		C. Date Prepared:	
D. Prepared By: (Rank, Last Name, Duty Position)					
E. Task	F. Identify Hazards	G. Assess Hazards	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls ("How To")
K. Determine overall mission/task risk level after controls are implemented (circle one)					
LOW (L)		MODERATE (M)		HIGH (H) EXTREMELY HIGH (E)	

Figure A-2. Sample Risk Management Work Sheet

Examples provided in Figures A-3 through A-6 should help individuals manage risk at the tactical level.

A. Mission or Task: Prepare defensive positions		B. Date/Time Group Begin: 010035R May XX End: 010600R May XX		C. Date Prepared: 29 April XX	
D. Prepared By: (Rank, Last Name, Duty Position) LT Jones, Plt Ldr					
E. Task	F. Identify Hazards	G. Assess Hazards	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls ("How To")
Construct nonstandard antivehicular wire obstacle	Back injuries and wire cuts during material offload	Moderate (M)	Use proper lift and carry methods and wear concertina wire gloves and safety goggles	Low (L)	Unit TACSOP, ARTEP 5-145 DRILL (pg 2-44)
	Blunt trauma and cuts in pounding of U-shaped pickets	Moderate (M)	Wear helmet and increase situational awareness	Low (L)	Unit TACSOP, ARTEP 5-145 DRILL (pg 2-44)
	Cuts when unrolling concertina	Moderate (M)	Wear concertina wire gloves and maintain situational awareness	Low (L)	Unit TACSOP, ARTEP 5-335-11-MTP (pg 2-44)
	Cuts when installing concertina	Moderate (M)	Wear concertina wire gloves and maintain situational awareness	Low (L)	Unit TACSOP, ARTEP 5-145 DRILL (pg 2-44)
	Cuts when installing barbed wire	Moderate (M)	Wear concertina wire gloves and maintain situational awareness	Low (L)	Unit TACSOP, ARTEP 5-335-11-MTP (pg 2-44)
K. Determine overall mission/task risk level after controls are implemented (circle one)					
LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)					

Figure A-3. Example of Completed Risk Management Work Sheet for Squad/Platoon

Glossary

AAR	after-action review
ADA	air defense artillery
ARFOR	army forces headquarters
ARTEP	Army Training and Evaluation Program
assessment	an analytical process to determine an organization's current levels of proficiency on a specific objective (for example, a training objective or risk management implementation) (CJCSM 3500.03)
base operations support	the provision of administrative and logistical services; includes supply operations, maintenance of materiel, personnel support, base services and administrative services rendered by or through activities of the supporting installation
BASOPS	base operations support
C²	command and control
COA	course of action
CofS	chief of staff
combat power	the total means of destructive and/or disruptive force that a military unit or formation can apply against an opponent at a given time; a combination of the effects of maneuver, firepower, protection, and leadership
controls	actions taken to eliminate hazards or reduce their risk
CP	command post
CSS	combat service support
CTC	combat training center

danger	exposure or vulnerability to harm or risk; the balance between the chance or probability of a hazardous incident and the result of the hazardous incident
EAC	echelons above corps
evaluation	the process used to measure the demonstrated ability to accomplish specified objectives such as training within a discrete event or exercise (CJCSM 3500.03); measurement of the demonstrated ability of soldiers or units to perform a task and supporting skill and knowledge or learning objective against the established standard
exposure	the frequency and length of time personnel and equipment are subjected to a hazard
FM	field manual
FRAGO	fragmentary order
fratricide	the employment of friendly weapons and munitions with the intent to kill the enemy or destroy his equipment or facilities, which results in unforeseen and unintentional death or injury to friendly personnel
friction	the accumulation of chance errors, unexpected difficulties, enemy actions, and confusion of battle
FSO	fire support officer
G3	general staff operations section
hazard	any actual or potential condition that can cause injury, illness, or death of personnel, damage to or loss of equipment, property or mission degradation (FM 101-5); a condition or activity with potential to cause damage, loss or mission degradation (Joint Pub 1-02)
inherently dangerous	an activity or task containing a danger to life or limb that is a permanent and inseparable element of the activity
IPB	intelligence-preparation-of-the-battlefield
IR	infrared

LOA	limit of advance
LOGCAP	Logistics Civil Augmentation Program
METL	mission-essential task list
METT-T	mission, enemy, terrain, troops, and time available
MOS	military occupational specialty
MTP	mission training plan
NBC	nuclear, biological, chemical
NVD	night vision device
OCOKA	O - observation and fields of fire, C - cover and concealment, O - obstacles, K - key terrain and decisive terrain, A - avenues of approach
OPCON	operational control
operational tempo	the pace of an operation or operations; OPTEMPO includes all of the activities the unit is conducting; OPTEMPO can be a single activity or a series of operations
OPLAN	operations plan
OPORD	operations order
OPTEMPO	operational tempo
personnel tempo	unit work load level and number of deployed days per year
PERSTEMPO	personnel tempo
PIR	priority intelligence requirements
probability	the likelihood that a hazardous incident will occur
PVO	private voluntary organization
residual risk	the level of risk remaining after controls have been identified and selected for hazards that may result in loss of combat power
risk	chance of hazard or bad consequences; the probability of exposure to chance of injury or loss from a hazard; risk level is expressed in terms of hazard probability and severity (FM 101-5)

risk assessment	identification and assessment of hazards (first two steps of risk management process); an identified hazard is assessed to determine the risk (both the probability of occurrence and resulting severity) of a hazardous incident due to the presence of the hazard
risk decision	the decision to accept or not accept the risks associated with an action; made by the commander, leader, or individual responsible for performing that action
risk management	the process of identifying, assessing, and controlling risks arising from operational factors and making decisions that balance risk cost with mission benefits
risk management integration	the embedding of risk management principles and practices into Army operations, culture, organizations, systems, and individual behavior
S3	operations officer
severity	the expected consequence of an event (hazardous incident) in terms of degree of injury, property damage, or other mission-impairing factors (loss of combat power and so on) that could occur
situational awareness	ability to have accurate and real-time information on friendly, enemy, neutral, and noncombatant locations; a common, relevant picture of the battlefield scaled to specific level of interest and special need
SOP	standing operating procedure
T&EO	test and evaluation outline
TACSOP	tactical standing operating procedure
TC	training circular
TF	task force
US	United States
XO	executive officer

Student Handout 3

This student handout contains the Case Study.

Student Handout 3

Case Study 1

Title

Risk Management Assessment

Introduction

As a platoon sergeant, you need to continuously conduct and monitor risk assessments to protect your soldiers and their equipment from mishaps and to preserve resources within your unit.

Motivator

This case study will reinforce your ability to appraise a risk assessment for completeness.

Safety Requirements

None

Risk Assessment Level

Low

Environmental Considerations

None

Evaluation

This is not a graded exercise. You may keep this case study for future reference.

Instructional Lead-in

This case study will give you the experience in monitoring, evaluating, and implementing a viable risk assessment process into your daily activities.

Resource Requirements

None

Special Instructions

You will discuss this case study during the lesson presentation. You may also use FM 100-14 (SH-2) to assist in discussing this case study.

Scenario

You are a platoon sergeant in a light infantry company. Your unit is to conduct its annual weapons qualification (M16A2) in less than 30 days. Your unit will also conduct Hands-on Performance Oriented Training (HOPOT) the day before, in the company area, to satisfy the Pre-marksmanship Instruction (PMI). This will consist of classes on proper sight picture and alignment; breathe, relax, aim, squeeze (BRAS) techniques; dime/washer exercise; and assuming a proper firing position (standing supported and unsupported, prone supported and unsupported). Your unit will conduct Common Task Training (CTT) in the cleared area across the street from the firing line for personnel waiting to fire.

Your platoon has 40 soldiers assigned. Of the 40 soldiers, twelve are new to the platoon (within the last 3 to 4 months, which includes two squad leaders), ten have been with the platoon for 4 to 12 months and the rest have been with the platoon more than a year. A recent training assessment indicated your platoon was well trained. The breakdown of platoon personnel is as follows (not counting the commander or first sergeant):

- LTs – 1 (Platoon Leader)
- SFCs– 1 (Platoon Sergeant)
- SSGs– 4 (Squad Leaders)
- SGTs – 5
- CPLs – 5
- SPCs – 9
- PFCs – 7
- PV2s – 8

Your platoon will conduct a tactical road march, to the rifle range and back to the company area, which is approximately 5 miles from the company area, consisting of sandy and/or hard-packed, mostly flat, terrain. Each soldier will carry his or her own assigned weapon, LCE, two full canteens of water, and a 30 pound ruck sack (carrying their own meals, 2 extra quarts of water, and other essential items).

Your platoon will depart at 0400 to be at the range NLT 0630, to commence firing NLT 0800. Plan to be on the range until at least 1500. This will mean the platoon will eat at least two meals of Meals Ready to Eat (MREs) at the range location.

The weather should be cold, with a morning temperature in the mid to low 30s, and an afternoon temperature in the mid to high 40s. Winds will be between 5-15 mph. The average precipitation for the next thirty days is usually 1 inch to 1.75 inches for your area of the country (which if cold enough could be snow or freezing rain).

**Scenario,
continued**

Last week you gave instructions to the second squad leader to conduct a risk assessment for the entire platoon since they will be the squad in charge of the range for that day. The squad leader submitted the completed Risk Management Worksheet this morning for you to review. (See the completed Risk Management Worksheet below).

**Risk
Management
Worksheet**

This is the Risk Management Worksheet the squad leader submitted. You will use this to participate in the classroom discussion.

RISK MANAGEMENT WORKSHEET					
A. Mission or Task: Annual Weapons Qualification		B. Date/Time Group: Begin: 0400ADDMMYY End: 1730ADDMMYY		C. Date Prepared: DDMMYY	
D. Prepared By: (Rank, Last Name, Duty Position) SSG B. Allucanbe, Squad Leader, 1 st Squad					
E. Task	F: Identify Hazards	G: Assess Hazards	H. Develop Controls	I: Determine Residual Risk	J: Implement Controls ("How To")
Annual Weapons Qualification & Tactical Road March	Cold Weather Uniform New soldiers Dehydration Limited visibility (darkness) Equipment load Blistered feet Range safety	E M M H E H H E	Awareness Training Training Awareness Acclimate Training Awareness Briefings	H L L M H M M H	TB Med 507 Unit SOP Rehearsals Unit SOP Safety SOP Unit SOP Unit SOP Range SOP
K. Determine overall mission/task risk level after controls are implemented (circle one):					
LOW (L)		MODERATE (M)		HIGH (H)	
EXTREMELY HIGH (E)					